F

stove and open to the space below the dome at its upper end. The volume of the combustion chamber is very large, *w* Nevertheless, it does not function in a satisfactory manner, because the streams of flaming gases have a very high temperature and,

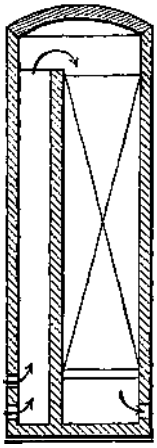

FIG. 70.

FIG. 71.

accordingly, a very slight density. For these reasons, the stream of flaming gases rises very rapidly, leaves the combustion chamber

(1) Guilow, in an article *(Revue de laSociete russe de M&tallurgie, 1911, p. 164)* gives the volume of the different portions of a Cowper hot hlast stove at the Kouchwa works, and the time the gas remains in these portions, as follows:

	Volume Cubic Meters	Time, Seconds
Combustion chamber	14 53	4 60
Dome of stove	6 16	1 77
Checkerwork openings	42 40	16 96
Chamber below the eheckerwork	5 14	5 14
Totals	68 23	28.47

Note by translator to English.—It is rather interesting to compare these volumes with the volumes of hot blast stoves given in a paper by Arthur J. Boynton, National Tube Co., Lorain, Ohio, before the October, 1916, meeting of the American Iron and Steel Institute. The Russian furnace is undoubtedly much smaller than the American furnaces.